

REMARKS

The present application includes pending claim 1-19, all of which have been rejected. By this Amendment, claims 1, 7, and 15 have been amended, while claim 16 has been cancelled without prejudice or disclaimer to the subject matter therein. The Applicants respectfully submit that the pending claims of the present application define patentable subject matter.

The drawings were objected to for failing to show the elements as described in the specification for Figures 1, 2 and 4. The Applicants respectfully submit, however, that Figures 1, 2 and 4, for example, do show the structural detail of the helmet. For example, Figures 1 and 2 show the basic safety helmet 10, having a basic outer shell 12, an upper portion 14, and a full brim 16. Further, Figure 4 illustrates the modified safety helmet 24 having a modified brim 26. The Applicants have re-submitted Figures 1, 2, and 4 for the convenience of the Examiner. The Applicants respectfully submit that the Figures and specification of the present application adequately support the claim limitations, and request reconsideration of the objection.

Claims 1, 2, 5, 6, 7, and 8 stand rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 6,029,269 ("El-Soudani"). Claims 3, 15, and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over El-Soudani in view of United States Patent No. 6,219,849 ("Crescentini"). Claims 4, 8, 9, and 12-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over El-Soudani in view of disclosed prior art. Claims 10, 11, and 17-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over El-Soudani in view of disclosed prior art and Crescentini. The Applicants respectfully traverse these rejections at least for the reasons discussed below.

I. El-Soudani Does Not Anticipate Claims Of The Present Application

The Applicants first turn to the rejection of claims 1, 2, 5, 6, 7, and 8 as being anticipated by El-Soudani. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *See* Manual of Patent Examining Procedure (MPEP) at 2131 (internal citation omitted). Further, “[t]he identical invention must be shown in as complete detail as it is contained... in the claim.” *See id.* (internal citation omitted). As discussed below, El-Soudani does not teach, nor suggest, “every element as set forth” in the claims of the present application.

El-Soudani discloses “steps of providing a titanium-based material preform and superplastically forming the prerform to a final helmet shape.” *See* El-Soudani at Abstract. El-Soudani also teaches a “first piece of fiber-reinforced titanium matrix composite material [being] hot isostatically pressed... to form a side wall section,” and a “second piece of fiber-reinforced titanium matrix composite material [being] hot pressed to form an upper dome section,” wherein the “side wall section is HIP/diffusion bonded to the upper dome section.” *See id.*

As shown in Figure 3 of El-Soudani, the “preform 22 is mounted between a cover plate 30 and a female die 32 having a desired helmet profile 34.” *See id.* at column 3, lines 65-67 and Figure 3. The preform 22 includes excess, trim scrap material located at its periphery. Figure 4 shows the excess trim scrap material extending outwardly from the lower portion of the helmet. El-Soudani is clear that this is “trim scrap” material, but not a possible brim.

Referring now to FIG. 4, a perspective view of a helmet, designated generally as 40, is shown, **with trim scrap material 42 shown intact**. The helmet product 40 is then cleaned and trimmed

to the final form illustrated in FIG. 5, shown mounted upon the test specimen.

Id. at column 4, lines 11-15 (emphasis added). Again, the “trim scrap” extending from the helmet is merely excess material that overlaps or extends over the die during a forming process, but is not a brim. El-Soudani does not teach or suggest, “selectively removing portions of the **brim of the basic safety helmet** after said forming step to produce a modified safety helmet **having a modified brim**,” as recited in claim 1, as amended. Thus, at least for this reason, the Applicants respectfully submit that El-Soudani does not anticipate claim 1, or the claims that depend from claim 1.

II. The Combination Of El-Soudani And Crescentini Cannot Render Claims 3, 15, and 16 Of The Present Application Unpatentable

The Applicants next turn to the rejection of claim 3, 15, and 16 as being unpatentable over El-Soudani in view of Crescentini. The Applicants note that claim 15 has been amended to include the limitations of claim 16. The Office Action relies on Crescentini for the disclosure of “molding of plastic (polymer) protective headgear.” *See* June 22, 2005 Office Action at page 3.

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure (MPEP) states the following:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the teaching. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion

to make the claimed combination and the reasonable expectation of success must both be found in the prior art.

See MPEP MPEP § 2142. Additionally, if a *prima facie* case of obviousness is not established, the Applicants are under no obligation to submit evidence of nonobviousness.

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See id.

“A prior art reference **must** be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” MPEP at 2141.02. The MPEP is clear that each prior art reference must be considered **in its entirety**.

El-Soudani “relates to ballistic-resistant helmets and more particularly to a lightweight titanium-based helmet shell.” El-Soudani at column 1, lines 6-8. El-Soudani discloses specific methods for forming such titanium-based materials. For example, El-Soudani discloses methods that require specific amounts of pressure over specific time periods to adequately form the titanium-based helmet. *See* El-Soudani, e.g., at column 4, lines 16-20, and 36-40. Again, El-Soudani is related to processes of forming “lightweight titanium-based helmets.” Titanium is a much stronger substance than a plastic or polymer. The Applicants respectfully submit that the substitution of a plastic or polymer into the processes described in El-Soudani would be incapable of producing a helmet because those processes are specific to titanium-based helmets. As such, those processes would not be amenable to plastic or polymers. Indeed, such processes

would most likely ruin the plastics/polymers. The Applicants respectfully submit that attempting to substitute a polymer into the process of E Soudani would be unworkable. As such, combining a reference that discloses molding polymer headgear with the specific titanium-based processes described in El-Soudani is improper. Thus, at least for this reason, the Applicants respectfully submit that claims 3, and 15 should be in condition for allowance.

III. El-Soudani Does Not Render Claims 4, 8, 9, And 12-14 Of The Present Application Unpatentable

The Applicants next turn to the rejection of claim 4, 8, 9, and 12-14 as being unpatentable over El-Soudani in view of disclosed prior art. Initially, the Applicants note that claims 4 and 8 should be in condition for allowance, at least for the reasons discussed above with respect to claim 1 of the present application.

El-Soudani and the “disclosed prior art” also do not teach, nor suggest, a “method of manufacturing a plurality of hardhats,” comprising “forming basic hardhats from a single mold,” and “wherein at least two of the modified hardhats have different shapes.” The background section of the present application states, in part, the following:

Safety helmets and hardhats, such as those described and identified above, may be manufactured through a process of molding. Typically, the outer shell of each helmet is formed through a mold. **Helmets of different shapes, such as different brim shapes and configurations, are typically formed through different molds.** That is, the outer shell of each helmet is defined by a cavity of a mold within which the outer shell was formed. **For each different shape of helmet, a different mold is typically used.** The shape of

the finished helmet, including the shape of the brim and other features, is defined by the shape of the corresponding mold.

See present application at ¶ [06] (emphasis added).

El-Soudani also includes a separate mold for a specific style of helmet. As explained above, El-Soudani discloses a process in which excess “trim scrap” material, which is not a brim, is removed from a structure after a forming process. Each tool-forming process disclosed in El-Soudani (e.g., as shown in Figure 3), however, is limited to a specific type of helmet. For example, El-Soudani states the following:

Referring now to FIG. 4, a perspective view of a helmet, designated generally as 40, is shown, with trim scrap material 42 shown intact. **The helmet product 40 is then cleaned and trimmed to the final form** illustrated in FIG. 5, shown mounted upon the test specimen.

Id. at column 4, lines 11-15 (emphasis added). Neither El-Soudani, nor any reference disclosed in the background section of the present application, teaches or suggests a “method of manufacturing a plurality of hardhats,” comprising “forming basic hardhats from a single mold,” and “wherein at least two of the modified hardhats have different shapes.” Thus, at least for this reason, the Applicants respectfully submit that El-Soudani and the “disclosed prior art” do not render claims 9, and 12-14 unpatentable.

IV. El-Soudani, Crescentini And The “Disclosed Prior Art” Do Not Render Claims 10, 11, And 17-19 Unpatentable

The Applicants now turn to the rejection of claims 10, 11, and 17-as being unpatentable over El-Soudani in view of disclosed prior art and Crescentini. The Applicants respectfully

Amendment for Serial No. 10/600,060
August 22, 2005
Page 12 of 12

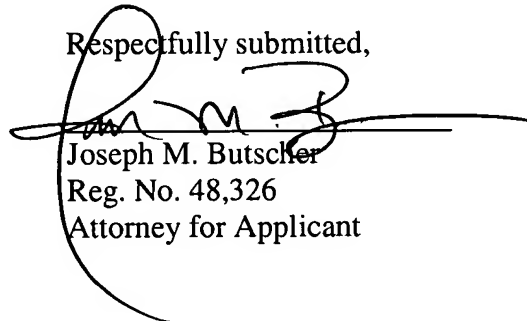
submit that this attempted combination does not render these claims unpatentable at least for the reasons discussed above.

V. Conclusion

The Applicants respectfully submit that the pending claims define patentable subject matter at least for the reasons discussed above, and respectfully request reconsideration of the claim rejections. While no fee is believed due with respect to this Amendment, the Commissioner is authorized to charge any fees due in connection with this submission or credit any overpayment to Deposit Account No. 13-0017.

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Respectfully submitted,



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